

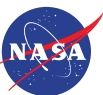
Caltech-JPL Collaboration – Complementary Strengths

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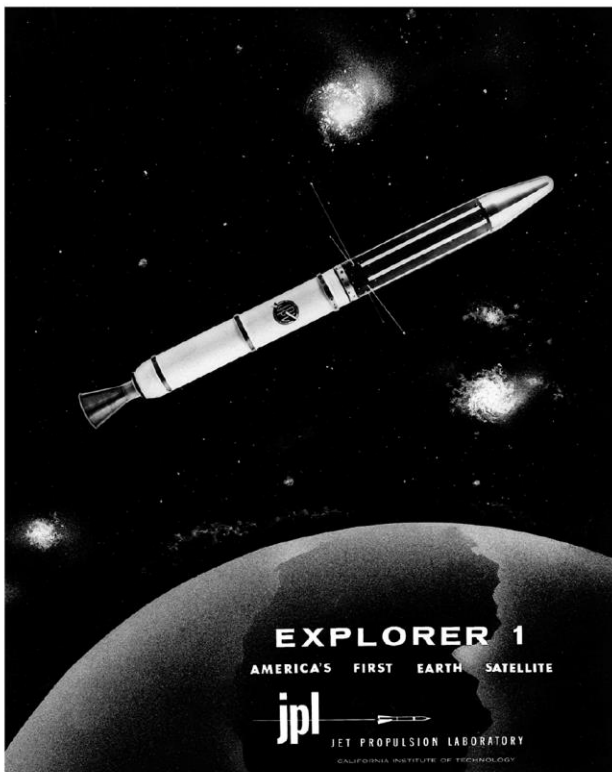


Above: In 1936 a team of Caltech students and researchers began rocket experiments at a rugged test site that grew to become JPL.



Jet Propulsion Laboratory
California Institute of Technology

Fist successfully launched US satellite in 1958
was built at JPL



Explorer 1 became the first successfully launched satellite by the United States when it was sent to space on January 31, 1958. A quick response to the Soviet Union's launch of Sputnik 1, Explorer 1's success marked the beginning of the U.S. Space Age. Right: A model of Explorer 1, held by JPL's Director William Pickering, scientist James Van Allen and rocket pioneer Wernher von Braun.

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Caltech – JPL Connection

Selected Caltech Faculty have Joint Appointments at JPL
JPL Scientists and Engineers Collaborate with Caltech Faculty



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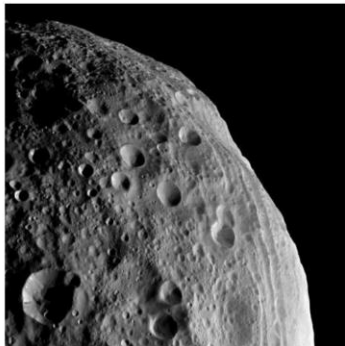
Jet Propulsion Laboratory

Founded by Caltech faculty, NASA's **Jet Propulsion Laboratory (JPL)** is a division of Caltech and is the leading U.S. center for the robotic exploration of the solar system. Working together, Caltech's and JPL's innovative researchers and technicians are shedding new light on our solar system's origins and are building knowledge not only of distant planetary environments, but of Earth and its atmosphere as well. JPL is currently responsible for conducting missions with more than two dozen spacecraft.

Caltech and JPL have engaged in more than 200 funded collaborations and joint appointments of faculty, lecturers, and visitors. Students and faculty also are involved in space exploration through five **NASA facilities at Caltech**:

- The Infrared Processing and Analysis Center (IPAC)
- The NASA Exoplanet Science Institute (NExSci)
- The Spitzer Space Telescope
- The NASA Herschel Space Observatory
- The Nuclear Spectroscopic Telescope Array (NuSTAR)

News about Caltech/JPL Collaborations



EXPLORATION and COLLABORATION: The JPL-Caltech Connection

CALTECH'S PARTNERSHIP WITH NASA'S JET PROPULSION LABORATORY HAS MADE POSSIBLE COUNTLESS DISCOVERIES ABOUT OUR UNIVERSE—HOW AND WHY BLACK HOLES FLARE, WHERE THE WATER ON MARS IS, AND HOW EARTH'S CARBON CYCLE WORKS, JUST TO NAME A FEW. CURRENT CALTECH FACULTY ARE PARTICIPANTS ON 12 MISSIONS.



OCO-2
Orbiting Carbon Observatory-2
OCO-2 is designed to study the carbon and water cycles and understand the natural and human-induced factors that affect the amount of carbon dioxide in Earth's atmosphere.

NEOWISE
Near-Earth Objects
Wide-Field Infrared Survey Explorer
The NEOWISE mission monitors the Solar System for objects near Earth, including asteroids and comets.

TES
Thermal Emission Spectrometer
TES is a thermal emission spectrometer that measures the thermal radiation emitted by the surface of Mars, providing data on the planet's composition and climate.

MRO
Mars Reconnaissance Orbiter
MRO has advanced the Mars Reconnaissance Orbiter's mission, providing data on the planet's composition and climate.

MER
Mars Exploration Rover - Opportunity
MER is the Mars Exploration Rover (MER) mission, providing data on the planet's composition and climate.

MSL
Mars Science Laboratory
MSL is the Mars Science Laboratory (MSL) mission, providing data on the planet's composition and climate.

JUNO
Jupiter Mission
JUNO is the Juno spacecraft, currently orbiting Jupiter, providing data on the planet's composition and climate.

CASSINI
Cassini-Huygens
Cassini is the Cassini-Huygens mission, providing data on the planet's composition and climate.

VOYAGER 1
Voyager 1
Voyager 1 is the Voyager 1 mission, providing data on the planet's composition and climate.

VOYAGER 2
Voyager 2
Voyager 2 is the Voyager 2 mission, providing data on the planet's composition and climate.

NuSTAR
Nuclear Spectroscopic Telescope Array
NuSTAR is the Nuclear Spectroscopic Telescope Array (NuSTAR) mission, providing data on the planet's composition and climate.

SPITZER SPACE TELESCOPE
Spitzer Space Telescope
Spitzer is the Spitzer Space Telescope (Spitzer) mission, providing data on the planet's composition and climate.

STUDYING OUR NEIGHBOR—EARTH
Caltech's planet is dynamic—every day a storm of carbon cycles the planet. It's the atmosphere that's the carbon cycle's engine, and the rest of the planet is the carbon cycle's storage. The carbon cycle is the engine that drives the planet's climate, and it's the carbon cycle that's the engine that drives the planet's life.

EXPLORE THE PLANETS—SOLAR SYSTEM
The planet has been studied by the Infrared Processing and Analysis Center (IPAC) and the NASA Exoplanet Science Institute (NExSci). The planet has been studied by the Infrared Processing and Analysis Center (IPAC) and the NASA Exoplanet Science Institute (NExSci).

DISCOVERING THE COSMOS—UNIVERSE
The universe is a vast and complex place, and it's the universe that's the engine that drives the planet's life. The universe is the engine that drives the planet's life, and it's the universe that's the engine that drives the planet's life.

- Over 200 Funded Collaborations between Caltech Faculty and JPL Scientists and Engineers
- Several Joint Appointments
- Caltech Professors on Assignment in Executive Positions such as the JPL Chief Scientist
- Student Programs such as SURF
- Targeted Funding to strengthen JPL and Caltech Complementary Collaborations.
- JPL Scientists and Engineers have opportunity to Teach at Caltech
- Caltech Faculty have been involved in many JPL Missions as Project Scientists and Science Team Members, while conducting their teaching and research activities.